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- $\bf 8. A$  method for dechlorinating chlorinated waste, comprising:
  - contacting at least one of chlorinated ethanes, chlorinate ethenes or chlorinated methanes with a microbial composition according to claim 4; and
  - anaerobically dechlorinating at least one of the chlorinated ethanes, chlorinate ethenes, or chlorinated methanes.
- 9. A method according to claim 8, wherein the chlorinated waste comprises contaminated soil or contaminated water.
- 10. A microbial composition according to claim 4, wherein said consortium of dechlorinatingly effective microbial species comprises:
  - a 16S rDNA nucleic acid sequence consisting of SEQ ID NO 1,
  - a 16S rDNA nucleic acid sequence consisting of SEQ ID  $^{\ 15}$  NO 2, and
  - a 16S rDNA nucleic acid sequence consisting of SEQ ID NO 3.
- 11. A microbial composition according to claim 4, wherein the consortium further comprises at least one 16S rDNA a

- nucleic acid sequence that has more than 99% identity to a nucleic acid sequence consisting of SEQ ID NO 7.
- 12. A microbial composition for concurrent dechlorination of a mixture of chlorinated ethanes and chlorinated ethenes, comprising an isolated bioremediative consortium comprising:
  - Clostridium having a 16S rDNA nucleic acid sequence consisting of SEQ ID NO 1;
  - Acetobacter having a 16S rDNA nucleic acid sequence consisting of SEQ ID NO 2; and
  - Dehalobacter having a 16S rDNA nucleic acid sequence consisting of SEQ ID NO 3.
  - 13. A microbial composition according to claim 12, further comprising:
    - Bacteroides having a 16S rDNA nucleic acid sequence consisting of SEQ ID NO 4 or SEQ ID NO 5;
    - Proteobacteria having a 16S rDNA nucleic acid sequence consisting of SEQ ID NO 6 or SEQ ID NO 7; and *Dehalococcoides*.

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